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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/586,484 06/01/00 SMITH

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EXAMINER

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LUM, L

ART UNIT

PAPER NUMBER

3611

DATE MAILED: 08/10/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/586,484

Applicant(s)

Smith, Bradley

Examiner

Lum, Lee S.

Art Unit

3611

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Jun 1, 2000

2a) ☐ This action is FINAL.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-24 is/are pending in the application

4a) Of the above, claim(s) _____ is/are withdrawn from consideration

5) ☒ Claim(s) 13-19 is/are allowed.

6) ☒ Claim(s) 1-12 and 20-24 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2

20) ☐ Other: _____

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1A. Claims 1, 2, 4, 5, 7, 8, 10, 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al 5845933.

Re Claims 1, 2, 4, 5, 7, 8 and 10, Walker discloses inflator 10 comprising arcuate, elongated diffuser tube 12 containing a stack (Col 10, lines 18-19) of gas generant material 56, the tube including gas exits 18, and, the material comprising cylindrical annular-shaped grains, diffusing container 52 (Col 9, last five lines) within the tube, and surrounding a portion of the grains, elongated igniter 26 within the cavity formed by the grains, and, airbag (unidentified).

The patent does not disclose the tube as having a length-to-diameter ratio greater than 20, but this feature is a design choice, and does not affect functionality. Nevertheless, it would have been obvious to one with ordinary skill in the art at the time the invention was made to include various sizes in order for adaptation to different applications.

Re Claim 20, the patent discloses a method of inflating an airbag, the steps derived from the structure and means described above.

Re Claim 24, the patent (inherently) discloses that the tube is bent to conform to the physical location of which it is designed.

1B. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker in view of Sheng 6068290.

Walker does not disclose an ignition-enhancing material coated on the inner surfaces of the grains, while Sheng shows this feature in Col 3, last paragraph. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include an accelerator on the grains as another embodiment for specific applications.

1C. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker in view of Armstrong III et al 5551724.

The previous patents do not disclose the container as comprising expanded metal, while Armstrong shows this characteristic in Col 11, lines 8-11 (and as described in the spec, p16). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this type of material in order to direct the outgoing gas towards the airbag, and treat it for particulates/undesired materials.

1D. Claims 9, 11, 12 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker in view of Haland et al 5788270.

Walker does not disclose a curtain airbag, while Haland shows this type of airbag (unidentified). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include other types of airbags in order to increase applicability.

1E. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker in view of Wilhelm 4158696.

The previous patents do not disclose that the grains react substantially simultaneously, while Wilhelm shows this characteristic in Col 3, last line, to the next column. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include a material which can be ignited substantially simultaneously to minimize the reaction time in which the airbag is inflated.

2. ALLOWABLE SUBJECT MATTER

2A. Claims 13-19 are allowable.

2B. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior art does not show a discharge element/diffuser that deforms to form flow paths.

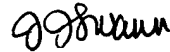
3. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure, in addition to the art listed on the IDSs filed 6/1/00: Taylor et al 6051158, Lindsey et al 5871228, 5743556, Rink et al 5547638, Hamilton et al 5541704, 4200615, Hock 5398966, Jorgensen et al 4005876.

4. Communication with the Examiner and USPTO

Any inquiry concerning this communication should be directed to Ms. Lum at telephone number (703) 305-0232, 9-530, M-F. If she can't be contacted, her supervisor, Ms. Judy Swann, can be reached at (703) 306-4115.

Our fax number is (703) 308-2571. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer assistance at (703) 306-5771.

Ms. Lee S. Lum
Examiner
8/1/01


J. J. SWANN
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